

SUMMER MOVEMENTS OF SCULPIN, SALMONIDS, AND WESTERN TOADS IN A SMALL MONTANA STREAM^{AFS}

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We studied the movements of fishes and amphibians in Chamberlain Creek, Montana from 24 July to 16 August, 2001. We operated six weirs with two-way traps, and one additional upstream trap, at various distances (from 14 to 1596 m) along the stream to quantify the timing, direction and distance of individual movements. We captured and marked 9 western toads (*Bufa boreas*) and 567 fishes of six species, including 368 westslope cutthroat trout (*Oncorhynchus clarki lewisi*), and 172 slimy sculpin (*Cottus cognatus*). We estimated that 14 percent of slimy sculpin and 48 percent of westslope cutthroat trout were mobile (passed at least 2 weirs), and most maintained detectable home ranges. We recaptured 173 westslope cutthroat trout, detecting net movements (distance between the two most distant capture locations) of up to 1581 m (median 91 m). Home ranges of 126 westslope cutthroat trout ranged from less than 18 to 1581 m (median 64 m). We detected net movements by slimy sculpin of up to 209 m and home ranges between 18 and 176 m (median 26 m). Western toad home ranges varied from 283 to 1596 m. All species moved more frequently during night/twilight ($n=296$) than during day ($n=83$). At the two-way traps, more fish were captured moving downstream ($n=419$) than upstream ($n=277$), although westslope cutthroat trout moved more frequently moving downstream at night and upstream during the day. Western toads were only captured in the morning, and although we detected upstream movements, we only captured toads in downstream traps. The results demonstrate considerable summer movement by fish and amphibians.